1916 with the vaccine made of B. typhi-exanthematici would seem, therefore, to indicate that it is capable of reducing the incidence of the disease, although it does not produce an absolute immunity to typhus fever.

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**The Comparative Resistance of Bacteria and Human Tissues to Certain Germicidal Substances.**—Lambert (*Jour. Am. Med. Assn.*, 1916, lxvii, 1300) says that it is recognized that an ideal germicide for use on infected tissues of the body is one that will kill the pathogenic microörganisms present without at the same time injuring the tissues. Lambert found that cells are more easily destroyed than bacteria by all but one (iodin) of the agents used. However, in the case of several, mercuric chlorid, sodium hypochlorite (Dakin's solution), potassomercuric iodid, argyrol and phenol—the difference is not great. It is interesting that no harmful effect whatever was seen from exposure of cells for one hour to 10 per cent. alcohol. The low bactericidal power of hydrogen peroxid, so popular among the laity, is noteworthy. It is possible, however, that on account of the fibrin-dissolving property of iodin, causing conceivably an inhibition of wound healing, some other substance may be found approaching more closely the ideal tissue disinfectant.

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**Alpha-iodin, Active Constituent in Thyroid.**—Kendall (*Boston Med. and Surg. Jour.*, 1916, clxxv, 557) reports his investigations which seem to indicate that the active constituent of the thyroid gland is contained in alpha-iodin, a crystalline compound. There appears to be no other substance in the thyroid secretion which acts directly. This substance, given even in very small amounts, will supplant thyroid activity, relieving the conditions of myxedema and cretinism, and in excess will produce symptoms simulating exophthalmic goitre. It appears to have no direct action on the pulse rate. The extent to which the rate is affected depends not on the administration of the thyroid, but on the simultaneous ingestion of food, and in particular of amino-acids. This effect may be outlined as follows: After the administration of the compound, there is no apparent effect for many hours. There is no increased pulse rate, nor drop in blood pressure. However, if the thyroid hormone and amino-acids are injected simultaneously, the pulse rate is enormously affected, and even death may result, due to the apparently great increase in metabolism going on in the animal. It appears very probable that the thyroid hormone manifests its activity by reacting in some way with amino-acids.

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**The Toxicity of the Present Supply of Salvarsan and Neosalvarsan.**—Ormsby, Mitchell, Moody and Ellis (*Jour. Am. Med. Assn.*, 1916, lxvii, 1756) all report a striking increase in the number of severe reactions following the injection of salvarsan and neosalvarsan recently imported from Germany. The toxic symptoms following salvarsan were strikingly vasomotor and accompanied or followed the injections. Marked generalized erythema, and in some cases urticarial wheals, appeared. Lacrimation occurred, followed by injection of the conjunctival vessels. The patient tossed the head from side to side in evident respiratory embarrassment, and complained of a feeling of constriction about the chest. The pulse, at first full, quickly became rapid and weak, accompanied usually by pallor. In a few cases, nausea and vomiting occurred. The reaction following the injection of the present neosalvarsan differs from that of salvarsan in that there is a marked tendency to nausea and vomiting. In a few cases urticarial wheals have followed each injection, but the diffuse erythema, lacrimation and respiratory difficulty with fall of blood-pressure, observed after salvarsan, have not occurred.

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**The Administration of Arsenobenzol by Mouth.**—SCHAMBERG, KOLMER and RAIZISS (*Jour. Am. Med. Assn.*, 1916, lxvii, 1919) say that experiments on animals have demonstrated that arsenobenzol (salvarsan) can be administered by mouth in solution as in capsules and become absorbed into the blood. The proof that absorption takes place is evidenced by the fact that a distinct destructive influence on trypanosomes in the blood of experimentally infected animals is exerted. Experimental studies on animals also demonstrated that arsenobenzol can be administered in capsule form over long periods of time without harmful results. Clinically they report that, during the course of four months, arsenobenzol in capsule form has beem administered by them to about thirty patients in various stages of syphilis. The drug was given at first in ordinary gelatin capsules, but later in luteric capsules, in order to prevent the capsules being absorbed in the stomach. In a general way they found that the effect of the drug on the secondary eruption is much slower than after intravenous injection. Ordinarily it required about three weeks to cause the disappearance of a macular or papular eruption with the doses administered. In 1 case, however, a large papular syphilid of the face disappeared in three or four days, with almost the degree of rapidity that it would after an infusion of the drug into the blood. Tertiary nodular lesions required from two to three weeks' administration to affect their disappearance. In order to prevent oxidation of the arsenobenzol in the capsule, sodium hydrosulphite was incorporated with it, and a small amount of bismuth subgallate was added to prevent diarrhea. A capsule containing one-half grain of arsenobenzol was given after each meal, and in most patients no gastric or intestinal distress resulted. Some patients were able to take the capsules for six weeks without any distress. The authors do not advocate the use of salvarsan by mouth as a substitute for intravenous or intramuscular administration. It is not always possible, however, to administer salvarsan by intravenous or intramuscular injection. Inaccessibility of veins by excessive adiposity, thrombosis of veins due to repeated injections, or similar reasons may prevent intravenous injections. Another indication for the use of salvarsan capsules is as a supplementary treatment to intravenous administration. The disadvantage of intravenous salvarsan therapy is the fact that most of the drug is eliminated in a short time, but by combining the oral administration of salvarsan with the intravenous, a continuous source of the drug may be supplied to the blood. If it becomes necessary to administer a drug by mouth for the treatment of syphilis—the authors advocate salvarsan in preference to mercury, first, because it is a more powerful spirocheticide, and second, because it has a more